REMARKS

Reconsideration of the present application is respectfully requested. Claims 1, 3-4, 6-8, 10, 12, 14-15, 17, and 19-23 are pending. Claims 1, 4, 10, 15, 17, and 21-22 have been amended. No claims have been added or canceled.

Interview Summary

Applicants wish to thank the Examiner for the telephonic interview conducted on June 5, 2007. During the interview, representative of the Applicants and the Examiner discussed claim 1 and the rejections of claim 1 under § 112, second paragraph, and the rejection of claim 1 under § 103(a). The Examiner and the representative of the Applicants agree that the proposed amendments to claim 1 (which are entered herein) would overcome the rejection under § 112, second paragraph. Further, the Examiner indicated that claim 1 as amended would likely overcome the rejection under § 103(a) relying on the art of record (U.S. 6,502,205 and U.S. 5,636,360).

35 U.S.C. § 112 Rejections

Claim 3 is rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Applicants respectfully traverse the rejection. The Office Action alleged that the condition of "when the first portion of the non-volatile storage device in the first storage server is full, sending a synchronization request to the second storage server from the first storage server" is not found in the Specification. Applicants respectfully disagree and direct the Examiner's attention to paragraphs 42 and 44 of the Specification. According to paragraph 42, consistency points (CPs) are

executed by the source filer 102 at predetermined intervals or when an NVLog partition is full. At the same time the source filer 102 issues the CP request, the destination filer 104 also updates the volume 112. Paragraph 44 further discloses that when the partition 208 is full, a CP is issued on the source filer 102, and the requests are applied to the volume 110 managed by the source filer 102 and the image volume 112 managed by the destination filer 104. In other words, the volume 110 and its image volume 112 are synchronized in response to the source filer 102 issuing the CP. Thus, the CP inherently includes a synchronization request from the source filer 102 to the destination filer 104. Thus, the limitation at issue is fully supported by paragraphs 42 and 44 in the Specification. Applicants respectfully request withdrawal of the rejection.

Claims 1, 3, 4, 6-8, 10, 12, 14, 15, 17, 19, and 20 are rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicants regard as the invention. Applicants respectfully traverse the rejection. Claims 1, 10, and 17 have been amended to more particularly point out and distinctly claim the subject matter the Applicants regard as the invention. Claims 3, 4, 6-8, 12, 14, 15, 19, and 20 depend, directly or indirectly, from claims 1, 10, and 17, respectively. Applicants respectfully submit that the amendments to claims 1, 10, and 17 have overcome the rejections on claims 3, 4, 6-8, 12, 14, 15, 19, and 20 as well. Withdrawal of the rejection is respectfully requested.

35 U.S.C. § 102(b) Rejections

Claims 21 and 23 are rejected under 35 U.S.C. § 102(b) as being anticipated by Yanai et al. (US 6,502,205). Applicants respectfully traverse the rejection.

Claim 21 sets forth:

using the destination storage server to maintain *a plurality of files* in a non-volatile mass storage subsystem, *each said file corresponding to a separate one of the plurality of source storage servers*;

(Claim 21 as amended; emphasis added)

In contrast, Yanai fails to disclose at least the above limitation. According to Yanai, the system 210 includes a primary data storage system 214 and a secondary data storage system 246. In the secondary data storage system 246 (which was analogized to be the destination storage server in the Office Action), both log file 293 and data file 294 correspond to the log file 291 and the data file 292 of the primary data storage system 214 (which is a single data storage system) (Yanai, Figure 12). The log file 293 and the data file 294 in the secondary data storage system 246 do not correspond to separate storage servers. Thus, Yanai fails to disclose using the destination storage server to maintain *a plurality of files* in a non-volatile mass storage subsystem, *each said file corresponding to a separate one of the plurality of source storage servers*. For at least this reason, Yanai fails to anticipate Claim 21. Withdrawal of the rejection is respectfully requested.

Claim 23 depends from claim 21, and thus, is not anticipated by Yanai for the reason discussed above. Withdrawal of the rejection is respectfully requested.

Atty Dkt. No.: P01-1684/5693.P029   12   10/692,495
Response to Office Action mailed March 7, 2007
Amendment dated 6/6/2007

<u>35 U.S.C. § 103(a) Rejections</u>

Claims 1, 3, 4, 6, 10, 12, 14-15, and 22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Yanai et al. (US 6,502,205) in view of Courts el al. (US 5,636,360). Applicants respectfully traverse the rejection.

Claim 1 as amended sets forth:

> when the first portion of the non-volatile storage device in the first storage server is full, applying the data access request in the first portion of the non-volatile storage device to a volume managed by the first storage server, and *causing the second storage server to apply the data access request in the file stored in the mass storage device to an image volume of the volume*, wherein the second storage server manages the image volume and the mass storage device.

(Claim 1 as amended; emphasis added)

As admitted in the Office Action, Yanai does not disclose the above limitation (Office Action, p. 7). The Office Action alleged that Courts teaches a method of copying the contents of a *log buffer* to a log partition *when the log buffer is full* (Office Action, p. 7). Assuming *arguendo* that Courts disclosed such a method, copying the contents of *a log buffer* to a log partition when *the log buffer is full* is different from the teaching of claim 1 set forth above. Claim 1 does not recite copying the contents of the first portion of the non-volatile storage device in the first storage server to a log partition when the first portion is full. Rather, claim 1 teaches that, when the first portion of the non-volatile storage device in the *first* storage server is full, the *second* storage server is caused to apply the data access request to an image volume. To further illustrate the differences between claim 1 and Courts, references are made to Figure 6 of the Specification below. Figure 6 illustrates one exemplary embodiment covered by claim

1. The "first portion of the non-volatile storage device in the first storage server" may read on Δ log1 208 in the source filer 102. The second storage server may read on the destination filer 104. The limitation of "*causing the second storage server to apply the data access request in the file stored in the mass storage device to an image volume of the volume*" may read on the destination filer 104 being caused to apply the data access request in Δ file 1 204 to the image volume 112. The image volume 112 is a mirror image of a volume (not shown in Figure 6) managed by the source filer 102. In sum, the destination filer 104 applies the data access request in Δfile 1 204 to the image volume 112 when Δlog 1 208 is full. In contrast, Courts merely discloses copying the content out of a log file (which was analogized to be Δ log1 208) in a primary storage server to a log partition residing on a secondary storage server (Courts, col. 2, ln. 35-37). Therefore, Courts fails to disclose the limitation of claim 1 set forth above.

Since neither Yanai nor Courts, alone or in combination, discloses the limitation set forth above, claim 1 as amended is patentable over Yanai in view of Courts. Withdrawal of the rejection is respectfully requested.

For the reason discussed above with respect to claim 1, claim 10 is patentable over Yanai in view of Courts. Moreover, claims 3, 4, 6-9, 12, and 14-16 depend, directly or indirectly, from claims 1 and 10, respectively. Thus, having additional limitations, claims 3, 4, 6-9, 12, and 14-16 are patentable over Yanai in view of Courts. Withdrawal of the rejection is respectfully requested.

Claim 22 depends from claim 21, and thus, include every limitation set forth in claim 21. For the reason discussed above with respect to claim 21, Yanai fails to disclose every limitation set forth in claim 21. Furthermore, Courts fails to make up the

deficiencies of Yanai. Courts merely discloses copying the content of a log buffer to a log partition when the log buffer is full (Courts, col. 2, ln. 35-37). Courts does not disclose using the destination storage server to maintain *a plurality of files* in the non-volatile mass storage subsystem, *each said file corresponding to a separate one of the plurality of source storage servers*. Since Yanai and Courts, alone or in combination, fail to teach every limitation set forth in claim 22, claim 22 is patentable over Yanai in view of Courts. Withdrawal of the rejection is respectfully requested.

Claims 17 and 19-20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Yanai et al. (US 6,502,205) in view of McMillan Jr. (US 5,587,390), and further in view of Achiwa et al. (US patent publication 2004/0153719). Applicants respectfully traverse the rejection.

Claim 17 as amended sets forth:

> *applying the data access request in the first file to an image of a volume in response to a specified signal from the first source filer indicating that the first portion of the first nonvolatile memory is full,* wherein the volume is maintained by the first source filer and the image is maintained by the destination filer;

(Claim 17 as amended; emphasis added)

In contrast, none of Yanai, McMillan, Achiwa, alone or in combination, teaches the above limitation. For the reason discussed above with respect to claim 1, Yanai does not teach the above limitation.

As to McMillan, the reference discloses that a request is removed from a STI staging queue when the acknowledgement is transferred from the specified disk to the

STI module (McMillan, col. 5, ln.35-38). Like Yanai, McMillan does not teach the limitation of claim 17 set forth above.

Regarding Achiwa, the reference discloses a data storage system having multiple storage apparatuses interconnected to each other (Achiwa, paragraph [0009]). Achiwa does not teach the limitation of claim 17 set forth above.

Since none of Yanai, McMillan, Achiwa, alone or in combination, teaches every limitation set forth in claim 17 as amended, claim 17 is patentable over Yanai in view of McMillan and Achiwa. Withdrawal of the rejection is respectfully requested.

Claims 19-20 depend directly from claim 17. Thus, having additional limitations, claims 19-20 are patentable over Yanai in view of McMillan and Achiwa. Withdrawal of the rejection is respectfully requested.

Conclusion

For at least the foregoing reasons, the present application is believed to be in condition for allowance, and such action is earnestly solicited.

If the Examiner perceives any further obstacle to allowing the present application, he is invited to contact the undersigned at (408) 720-8300.

Pursuant to 37 C.F.R. 1.136(a)(3), Applicant hereby request and authorize the U.S. Patent and Trademark Office to (1) treat any concurrent or future reply that requires a petition for extension of time as incorporating a petition for extension of time for the appropriate length of time and (2) charge all required fees, including extension of time fees and fees under 37 C.F.R. 1.16 and 1.17, to Deposit Account No. 02-2666.

Respectfully submitted,

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Date:_____6/6/2007_____   _____

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